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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,665	08/05/2003	Takayuki Yoshimi	241102US3	5305

22850 7590 05/05/2005

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EXAMINER

OJINI, EZIAMARA ANTHONY

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,665

Applicant(s)

YOSHIMI ET AL.

Examiner

Anthony Ojini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12 is/are rejected.
- 7) ☐ Claim(s) 10, 11 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/29/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Restriction Requirement dated February 9, 2005 is hereby withdrawn.

Claim Objections

Claims 10,11,13 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 10,11,13 not been further treated on the merits.

Drawings

Figures 1,2 and 6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-9 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are too many **grindings** in claims 1 and 5.

There are too many **coolants** in claim 12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokogawa et al. (6,083,084) in view of Iwabuchi (6,454,636 B1).

With respect to claim 1, Yokogawa et al. disclose a grinding method comprising steps of: cutting off air layer flowing on a circumferential surface of said grinding wheel (4) by blowing a cold air stream jet transversally from one side to the other side of said grinding wheel (4) along said circumferential surface at an upper stream position of a rotational direction of said grinding wheel from said grinding point; and collecting the coolant blown by said cold air stream jet through a recovering port located below a wheel guard covering a part of said grinding wheel (see col. 12, lines 16-34 & fig. 1).

Yokogawa et al. also disclose in machine for grinding a workpiece by a grinding wheel to supply coolant to one of a grinding point by way of a relative movement between a

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workpiece supported by a work support device (1) but fail to disclose a grinding wheel rotatably supported on a wheel slide.

Iwabuchi discloses a grinding wheel rotatably supported on a wheel slide (see fig. 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to perform the method of Yokogawa et al. with a grinding wheel rotatably supported on a wheel slide in view of **Iwabuchi** so as to slide the grinding wheel and workpiece in contact position and ensure continuous grinding.

With respect to claim 2, Yokogawa et al. disclose wherein said grinding method further comprising steps of: absorbing said cold air stream jet of said coolant from said recovering port by an absorbing equipment; separating said cold air stream jet of said coolant from said recovering port by a separator inserted between said recovering port and said absorbing equipment; and discharging hydraulic coolant from a discharge port mounted on a lower portion of the wheel guard (see col. 12, lines 16-34 & fig.1).

With respect to claim 3, Yokogawa et al. disclose wherein said recovering port is formed on an upper portion of a back area of said wheel guard (fig.1).

With respect to claim 4, Yokogawa et al. disclose wherein said recovering port is mounted on said wheel guard at said other side of said grinding wheel to face to said blown cold air stream jet.

With respect to claim 5, Yokogawa et al. disclose a grinding machine comprising: a nozzle (18) mounted adjacent a wheel guard covering a part of said grinding wheel and blowing a cold air stream jet transversally from one side to the other side of said grinding wheel along a circumferential surface at an upper stream position of a

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rotational direction of said grinding wheel from said grinding point to cut off air layer flowing on said circumferential surface of said grinding wheel; and a recovering port mounted adjacent on said wheel guard and collecting a cold air stream jet of coolant blown by said hydraulic jet.

Yokogawa et al. also disclose in machine for grinding a workpiece by a grinding wheel to supply coolant to one of a grinding point by way of a relative movement between a workpiece supported by a work support device (1) but fail to disclose a grinding wheel rotatably supported on a wheel slide.

Iwabuchi discloses a grinding wheel rotatably supported on a wheel slide (see fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Yokogawa et al. with a grinding wheel rotatably supported on a wheel slide in view of Iwabuchi so as to slide the grinding wheel and workpiece in contact position and ensure continuous grinding.

With respect to claim 6, Yokogawa et al. disclose wherein said grinding machine further comprising: an absorbing equipment (23) collecting to said recovering port mounted adjacent the wheel guard (21); a separator (22) connected between said recovering port and said absorbing equipment and separating said mist of said coolant from said hydraulic jet; a discharge port mounted on a lower portion of said wheel guard and discharging hydraulic coolant from said wheel guard; and said hydraulic jet is air jet.

With respect to claim 7, Yokogawa et al. disclose wherein said recovering port is formed on a lower portion of a back area of said wheel guard (see fig. 1).

With respect to claim 8, Yokogawa et al. disclose wherein said recovering port is

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mounted on said wheel guard at said other side of said grinding wheel to face to said nozzle (see fig. 1).

Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over s as applied to claims 6 to claim 8 above, and further in view of Applicant Admitted Prior Art (**AAPA**).

With respect to claim 9, Yokogawa et al. fail to disclose wherein said grinding machine comprises a baffle plate mounted on said wheel guard and facing to said grinding wheel with a small clearance at an upper stream position of said rotational direction of said grinding wheel from a point of said hydraulic jet.

AAPA discloses a baffle plate mounted on said wheel guard and facing to said grinding wheel with a small clearance at an upper stream position of said rotational direction of said grinding wheel from a point of a hydraulic jet.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Yokogawa et al. with a baffle plate mounted on said wheel guard and facing to said grinding wheel with a small clearance at an upper stream position of said rotational direction of said grinding wheel from a point of a hydraulic jet in view of AAPA so as to reduce air layer flowing on the circumferential surface of grinding wheel.

Allowable Subject Matter

Claim 12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hill et al., Yoshimi et al., Hatamoto et al., Boyd, Eto et al., Mukai et al. disclose grinding apparatus respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Ojini whose telephone number is 571 272 4492. The examiner can normally be reached on 7 to 4 Tuesday-Friday with every other Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571 272 4485. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AO
4/21/05

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